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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,540	02/03/2005	Karikath Sukumar Varma	1-16908	7555
1678 7590 06/27/2008 MARSHALL & MELHORN, LLC FOUR SEAGATE - EIGHTH FLOOR TOLEDO, OH 43604				
EXAMINER				
BALDWIN, GORDON				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
06/27/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/523,540

Applicant(s)

VARMA ET AL.

Examiner

GORDON R. BALDWIN

Art Unit

1794

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17, 19-22 and 28-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17, 19-22 and 28-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/27/2008 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17, 19-22 and 28-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Boel (U. S. Pat. No. 4,190,698) and further in view of Varma (Pub. No. WO/2002/024445).

Consider claim 17, 20-22, 28-32, 41-42, De Boel teaches a light transmitting fire screening panel (considered to be transparent) comprising at least one sheet of glass and one layer of intumescent material which comprises a layer of a hydrated alkali metal silicate and polyhydric alcohol in the form of glycerine, or ethylene glycol with the addition of sodium aluminate as the alkali metal aluminate. (Abstract and Col. 3 lines 5-10 and 65-68) De Boel also teaches that the thickness of the intumescent layer is at

most 8mm and therefore can be in a range of greater than zero to 8mm. (Col. 4 lines 15-22) It is also taught that the weight ratio of SiO_2 to Na_2O was 3.3 to 1 with the percentage of water being 34%. (Col. 4 lines 45-55)

However, De Boel does not teach the use of a hydroxyl carboxylic acid with the clear intumescent layer, but Varma teaches a process for the production of an intumescent layer (that is 0.3-5.0 mm thick) upon the surface of a glass substrate which comprises a alkali metal waterglass with a alkali metal salt of carbonic acid or an alpha-hydroxy carbolic acid, which can be citric acid. (Claims 1, 2 and 11) Also, multiple glass sheet can be used. (Para. 23)

It would have been obvious for a person of ordinary skill in the art at the time of the invention to combine the intumescent layer of De Boel with the intumescent layer of Varma with an alpha-hydroxy carbolic acid that would aid in the drying process of the intumescent layer. (Para. 15 on page 3)

Additionally, the neutralization of the aluminate with a hydroxy carboxylic acid before mixing the silicate waterglass is considered to be a product-by-process limitation and even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process., (In re Thorpe, 227 USPQ 964,966). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art,

although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product (*In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983), MPEP 2113). In the present case, the product disclosed by the prior art includes the same materials as presently claimed, and, accordingly, appears to be substantially the same as the claimed product.

Additionally it is not clearly seen how this intermediate process step makes a physically different coating than the combination of De Boel or Varma.

Consider claim 19, 38-40, while neither De Boel nor Varma seem to teach the percentage of aluminum nor the ratio of silicon to aluminum, it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the aluminum content for the intended application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Consider claims 33-37, Varma teaches a sodium silicate waterglass with a weight ratio of $\text{SiO}_2\text{:Na}_2\text{O}$ is at least 2:1 more or preferably the weight ratio is at least 2.5:1 and preferably 2.85:1. Varma also teaches an alkali metal silicate waterglass with potassium silicate and lithium silicate waterglass wherein the ratio is $\text{SiO}_2\text{:K}_2\text{O}$ is in the range 1.4:1 to 2.1:1. (Para. 12 and 13 on page 3)

Response to Arguments

Applicant's arguments filed 5/27/2008 have been fully considered but they are not persuasive. As explained above this partial neutralization is considered to be a product-by-process limitation. The final product, that is considered to be taught by the combination of De Boel and Varma, is not considered to be different than the article claimed by the applicant. This aspect is considered to be especially true since De Boel does not mention that precipitates form in their intermediate steps without the addition of the carboxylic acid. Therefore, this intermediate neutralized of the aluminate with hydroxyl carbonate acid is considered to be an intermediate product in a product-by-process limitation in a claim to an article. The rejection stands because the combination of De Boel and Varma disclose the final product with a sufficient motivation to combine as stated above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GORDON R. BALDWIN whose telephone number is (571)272-5166. The examiner can normally be reached on M-F 7:45-5:15.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on 571-272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GRB

/Timothy M. Speer/
Primary Examiner
Art Unit 1794